



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,415	12/09/2004	Jan-Olof Svensson	P16012US2	8361
27045	7590	09/20/2006	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			TIBBITS, PIA FLORENCE	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/506,415

Applicant(s)

SVENSSON ET AL.

Examiner

Pia F. Tibbits

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>revised dwgs.</u> |

DETAILED ACTION

This Office action is in answer to the amendment filed 7/17/2006. Claims 5-7, 12-16 are pending, and claim 13 is amended.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **microcontroller**, the **microprocessor** must be shown or the feature(s) canceled from the claim(s), as per attached. No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2838

3. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by **Bruwer** [6249089].

Bruwer discloses in figures 1-17 a power supply circuit, comprising: a controlled switch 901 having a first state ON in which a connection is provided from a battery 101 to a load 105, and a second state OFF in which the load is disconnected from the battery, wherein the controlled switch 102 is implemented as a disable switch of a voltage regulator [see column 11, line 56] and control circuitry [see column 4, lines 36-40; column 10, lines 54-67] for controlling the state of the controlled switch, the control circuitry/multichip unit [see column 11, lines 54-57], configured to be disconnected from the battery when the controlled switch is in its second state [see fig.9; column 3, lines 65-67; column 4, line 1].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art disclosed by applicant, **DE-19533537**.

DE discloses in the abstract and figure a power supply circuit, comprising: a controlled switch 16 having a first state ON in which a connection is provided from a battery 14 to a load 10, and a second state OFF in which the load 10 is disconnected from the battery 14, wherein the controlled switch 16 is implemented as a disable switch of a voltage regulator 21 and control circuitry 18 for controlling the state of the controlled switch, the control circuitry 18 configured to be disconnected from the battery when the controlled switch is in its second state OFF and via optocoupler 22.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make integral the switch disconnecting the regulator and the control circuitry in order to

Art Unit: 2838

provide a monolithic construction, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routing skill in the art. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). See MPEP 2144.04.

As to claim 6, DE discloses wherein the control circuitry is adapted to monitor the battery voltage and switch the controlled switch to its second state when a voltage below a predefined reference value/deep discharge limit is detected.

As to claim 7: the statement "arranged to supply power to a mobile telephone", it has been held that a recitation with respect to the manner or method in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. See *Ex parte Wikdahl*, 10 USPQ2d 1546, 1548 (Bd. Pat. App. & Inter. 1989); *Ex parte Masham*, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Inter. 1987); *In re Casey*, 370 F.2d 576, 152 USPQ 235, 238 (CCPA 1967); see also M.P.E.P. § 2111.02. A process or environment of use limitation in an apparatus claim will not patentably distinguish the claim from the prior art unless it somehow imposes a structural limitation. "[I]ntended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." M.P.E.P. § 2111.02 (citing *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)).

6. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bruwer** in view of **Hull et al.** [5606242].

Bruwer does not disclose wherein the control circuitry configured to control the controlled switch, further comprises a micro-controller.

Hull discloses a **Smart Battery**, i.e., a battery which provides electrical power and which reports predefined battery parameters to an external device having a power management system, includes: at least one rechargeable cell connected to a pair of terminals to provide electrical power to an external device during a discharge mode and to receive electrical power during a charge mode, as provided or determined by the remote device; a data bus for reporting predefined battery identification

Art Unit: 2838

and charge parameters to the external device; analog devices for generating analog signals representative of battery voltage and current at said terminals, and an analog signal representative of battery temperature at said cell; a hybrid integrated circuit (IC) having a microprocessor for receiving the analog signals and converting them to digital signals representative of battery voltage, current and temperature, and calculating actual charge parameters over time from the digital signals, the calculations including one calculation according to an algorithm [see abstract]. Hull also discloses "The smart battery is intended for use with an intelligent host device such as a portable computer, portable video camera or cellular telephone having a system management bus and a smart charger, or an intelligent host device having a system power manager that can receive and send data over a system management bus "[column 4, lines 30-35]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Bruwer's apparatus and include a Smart Battery, as disclosed by Hull, in order to monitor predefined battery parameters.

As to claims 13-16, see remarks and references above.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

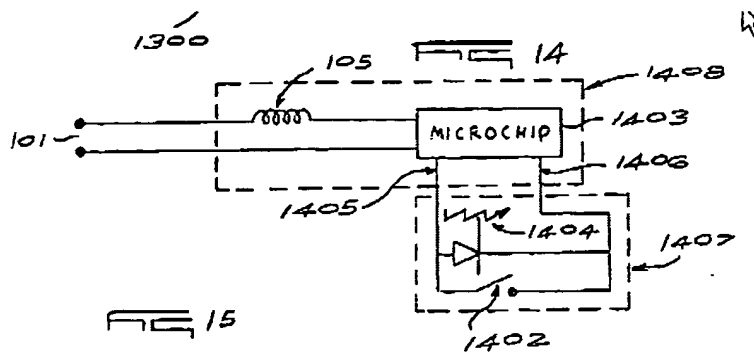
8. Applicant's arguments filed on 3/7/2006 have been fully considered but they are not persuasive:

a) 37 CFR 1.83(a) requires drawings to show the conventional names, as described in the specification, e.g. microprocessor, etc. for the elements shown in figures with non-conventional symbols.

b) the objection to the specification was canceled.

c) Bruwer clearly discloses at column 11, lines 54-56 and in fig.14:

Art Unit: 2838



The device shown as 1403 may be monolithic or be a multichip unit having a relay (solid state or mechanical), a regulator (eg: 110 AC volt to 12V DC) and a microchip as discussed in this application.

In other words, Bruwer clearly discloses a disable switch, element 1402.

Office personnel must rely on the applicant's disclosure to properly determine the meaning of the claims.

Markman v. Westview Instruments, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir.) (en banc), aff'd, U.S., 116 S. Ct. 1384 (1996). Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. **Sunrace Roots Enter. Co. v. SRAM Corp.**, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); **Brookhill-Wilk 1 LLC v. Intuitive Surgical, Inc.**, 334 F.3d 1294, 1298, 67 USPQ2d 1132, 1136 (Fed. Cir. 2003) ("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art.") However, an applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning. See **In re Paulsen**, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) >and **Vitronics Corp. v. Conceptoronic Inc.**, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996)<. Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. **Toro Co. v. WhiteConsolidated Industries Inc.**, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the

Art Unit: 2838

specification and drawings.”). Any special meaning assigned to a term “must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.” *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also *MPEP § 2111.01*. If the applicant asserts that a term has a meaning that conflicts with the term’s art-accepted meaning, Office personnel should encourage the applicant to amend the claim to better reflect what applicant intends to claim as the invention. If the application becomes a patent, it becomes prior art against subsequent applications. Therefore, it is important for later search purposes to have the patentee employ commonly accepted terminology, particularly for searching text-searchable databases.

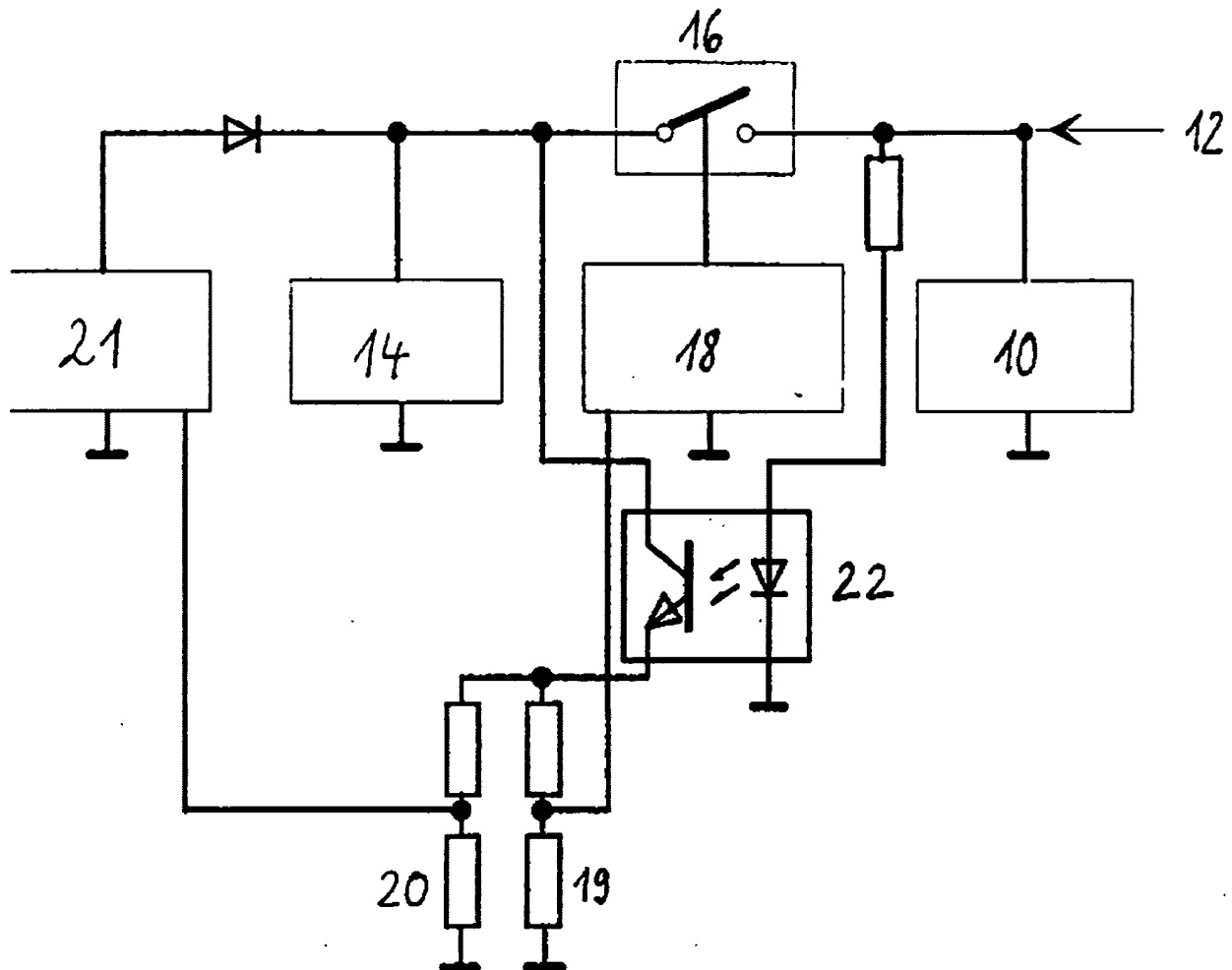
d) DE-19533537 also discloses in the abstract and in the figure:

The circuit protects a battery (14) provided for maintenance of supply to a load (10) after failure of the mains (12), which causes an electronic switch (16) to be closed by voltage monitoring and control logic (18). The deep-discharge measurement circuit and the battery-charging circuit are connected by an opto-coupler (22).

When the monitored voltage approaches the deep discharge limit, the switch is reopened and the load disconnected from the battery. The measuring and charging circuit voltage sensors (19,20) with the charge regulator (21) are also electrically isolated to prevent reconnection of the battery, which can occur only when the mains voltage is restored.

ADVANTAGE - Long-term effective protection of the battery against deep discharge is ensured.

Art Unit: 2838

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

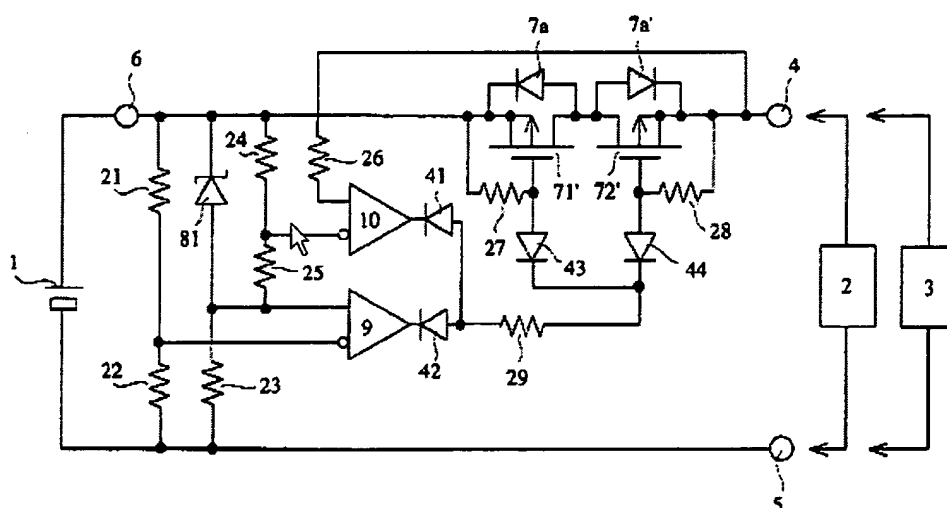
Art Unit: 2838

date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art cited in PTO-892 and not mentioned above disclose related apparatus:

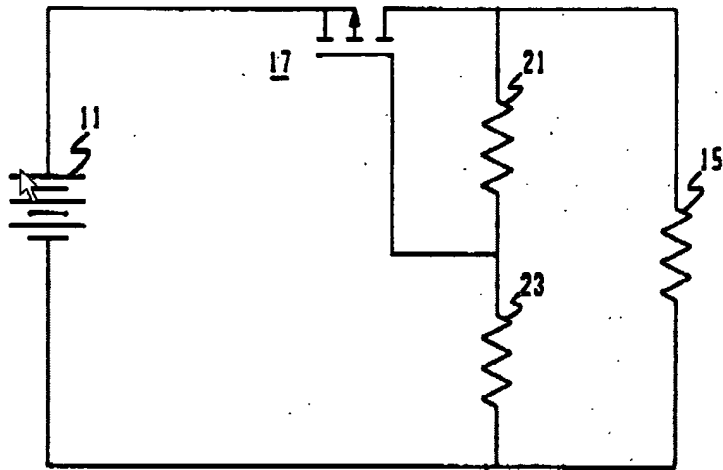
Abe et al. [5789902], prior art disclosed, describes a battery-monitoring circuit includes a bidirectionally current-controllable means disposed between a secondary battery and a load circuit for monitoring the charge or discharge of the secondary battery to prevent undesirable charging, that functions as a voltage-regulating circuit.



Haraguchi et al. [6346795], prior art disclosed, describes a discharge control circuit for a battery, and more particularly, to a discharge control circuit that prevents an over-discharge of a battery incorporated in a portable electric device.

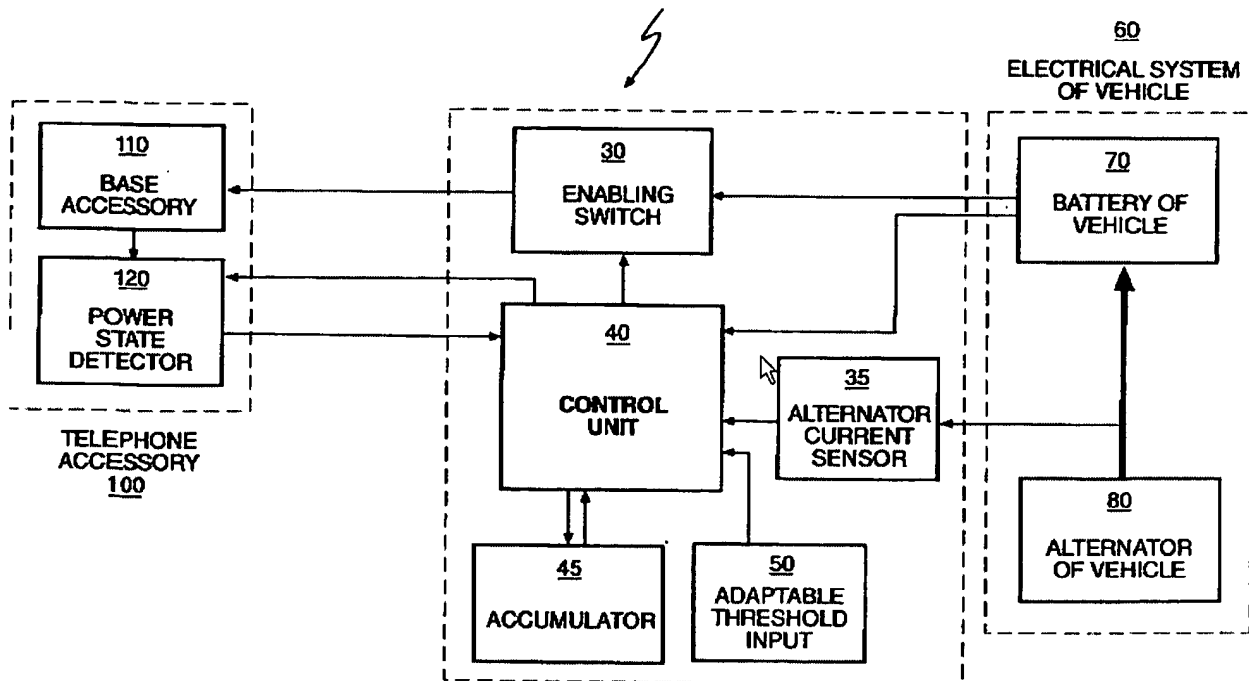
Staarmann et al. [5179337] discloses an over-discharge protection circuit for rechargeable batteries:

Art Unit: 2838



Irvin [5929604] discloses a battery-discharge-protection system for electronic accessories used in vehicles containing a battery so that when the total energy consumption meets or exceeds a threshold, the power to the battery-powered telephone device is interrupted in order to conserve a sufficient amount of power to start the vehicle and to operate other peripheral systems. This system includes an **"enabling switch"**:

Art Unit: 2838

**FIGURE 5**

Colles et al. [5949218] discloses an apparatus for regulating the voltage potential of a lithium ion battery based upon an operating range having an upper threshold (e.g., on the order of 4.2 v) and a lower threshold (e.g., on the order of 2.5 v) and for providing a reduction in dissipated power when the lithium ion battery is charging and when a load is drawing upon the lithium ion battery:

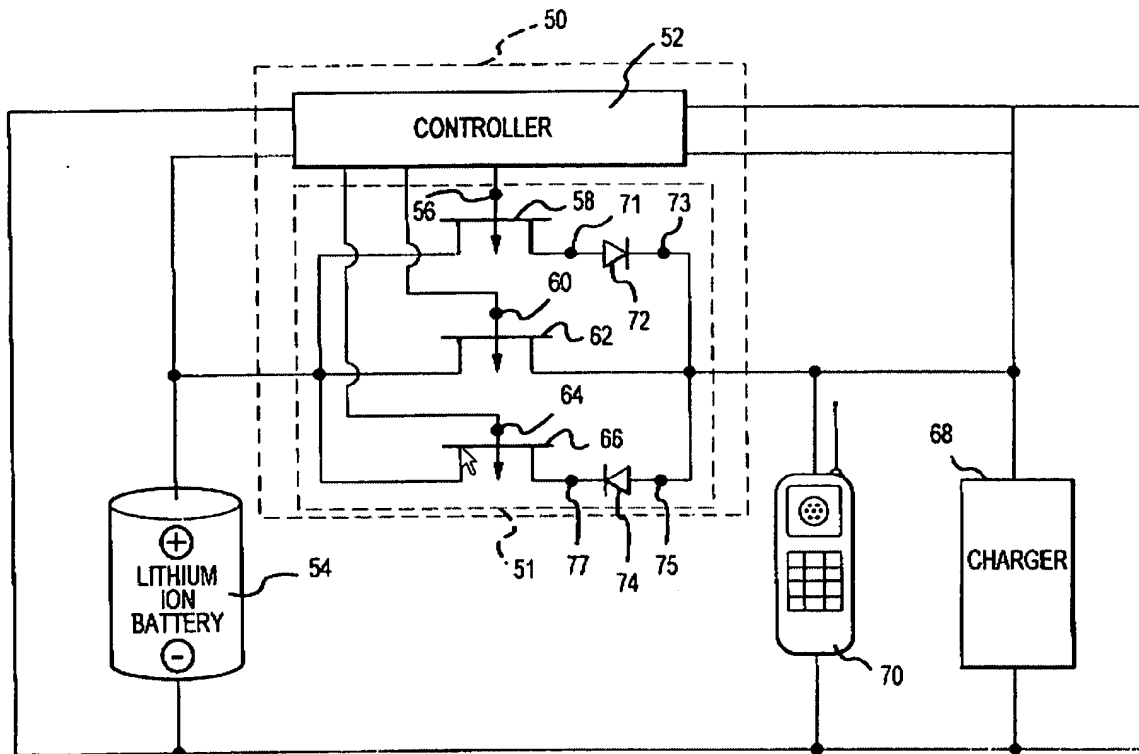


FIG.3

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571-272-2086. If unavailable, contact the Supervisory Patent Examiner Karl Easthom whose telephone number is 571-272-1989. The Technology Center Fax number is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/506,415

Page 13

Art Unit: 2838

PFT

September 6, 2006

Pia Tibbits

Primary Patent Examiner

A handwritten signature in black ink, appearing to read 'Pia Tibbits', with a stylized flourish at the end.

1/3

APPROVED AS REVISED
9/10/06 DAB

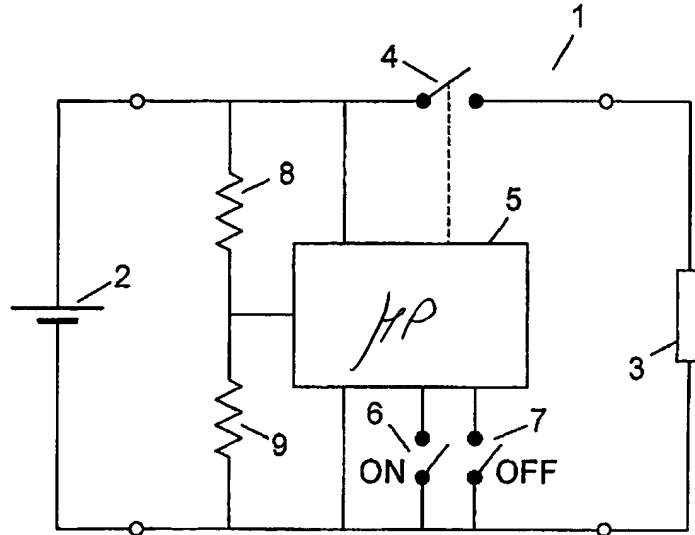


Fig. 1

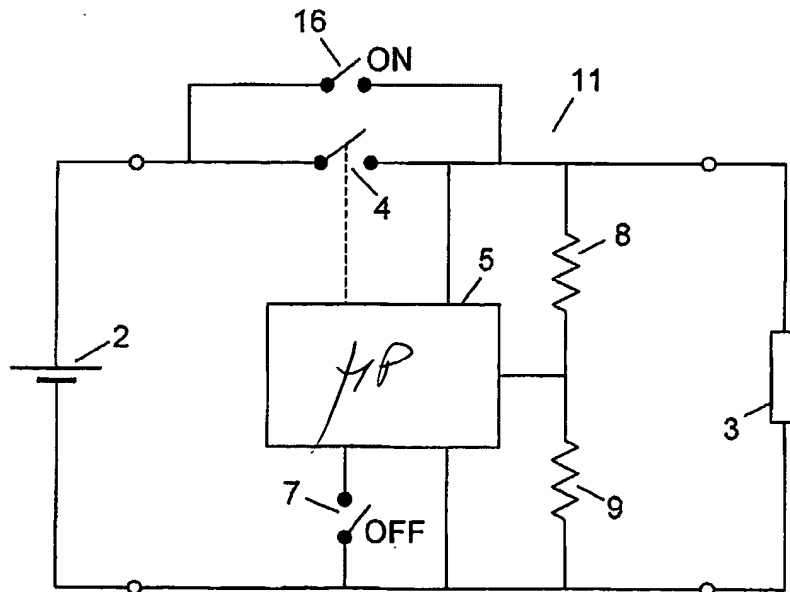


Fig. 2

2/3

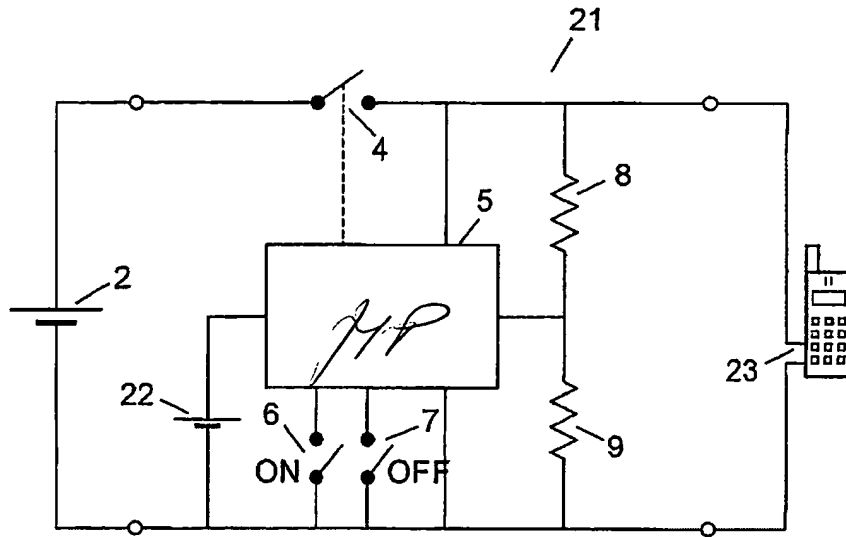


Fig. 3

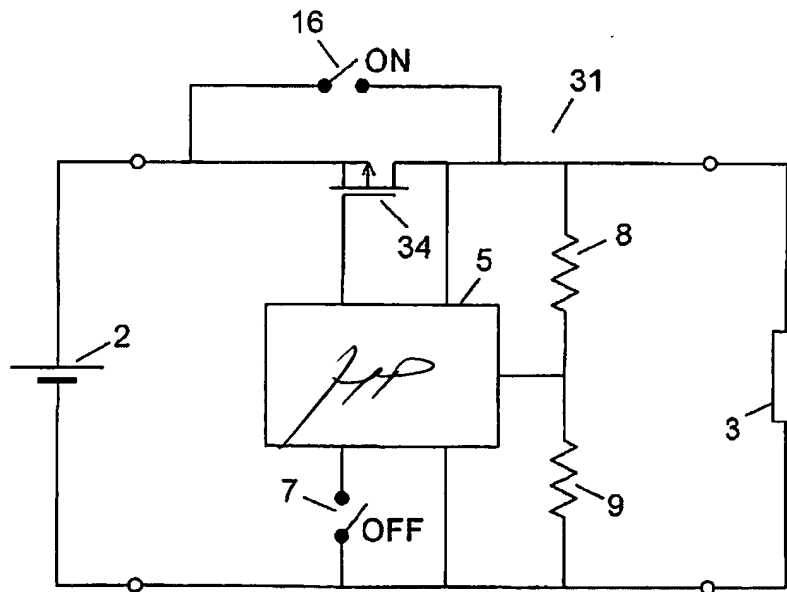


Fig. 4

APPROVED AS REVISED
9/10/06 PB

Approved as Revised
9/16/06

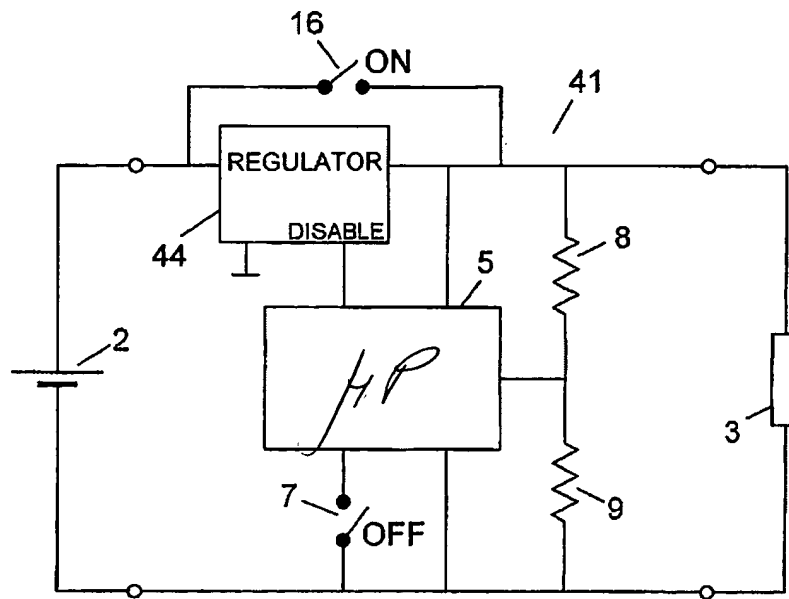


Fig. 5